Amendments to the Claims.

This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims:

1. (Currently amended) A mMethod of producing a radiolabelled gallium complex by

reacting a Ga³⁺ radioisotope with a macrocyclic bifunctional chelating agent

characterised in that the reaction is carried out using microwave activation at 80 to 120 W

for 20 s to 2 min and wherein the.

2. (Currently amended) The mMethod according to claim 1 wherein the Ga³⁺ radioisotope is

selected from the group consisting of ⁶⁶Ga³⁺, ⁶⁷Ga³⁺ and ⁶⁸Ga³⁺.

3. (Currently amended) The mMethod according to claim 1 wherein the Ga³⁺ radioisotope is

 $^{68}Ga^{3+}$.

4. (Cancelled)

5. (Currently amended) The mediation according to claim 1 wherein the chelating agent

comprises hard donor atoms, preferably O and N atoms.

6. (Cancelled)

7. (Currently amended) The method according to claim 1 wherein the chelating agent is a

bifunctional chelating agent comprises emprising a targeting vector selected from the

group consisting of proteins, glycoproteins, lipoproteins, polypeptides,

glycopolypeptides, lipopolypeptides, peptides, glycopeptides, lipopeptides,

carbohydrates, nucleic acids, oligonucleotides or a part, a fragment, a derivative or a

complex of the aforesaid compounds and small organic molecules.

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8. (Currently amended) The mMethod according to claim 7 wherein the target vector is a particle or cligoryclastic.

peptide or oligonucleotide.

9. (Currently amended) The mMethod according to claim 1 wherein the microwave

activation is carried out at 80 to 120 W, preferably at 90 to 110 W.

10. (Currently amended) The mMethod according to claim 1 wherein the microwave

activation is carried out for 20 s to 2 min, preferably for 30 s to 90 s.

11. (Currently amended) The mMethod according to claim 3 wherein the ⁶⁸Ga³⁺ is obtained

by contacting the eluate from a ⁶⁸Ge/⁶⁸Ga generator with an anion exchanger and eluting

⁶⁸Ga³⁺ from said anion exchanger.

12. (Currently amended) $\underline{\text{The m}}\underline{\text{M}}\text{ethod}$ according to claim 11 wherein the ${}^{68}\text{Ge}/{}^{68}\text{Ga}$

generator comprises a column comprising titanium dioxide.

13. (Currently amended) The mMethod according to claim 11 wherein the anion exchanger

comprises HCO₃ as counterions.

14. (Currently amended) The method according to claim 11 wherein the anion exchanger is

an anion exchanger comprising quaternary amine functional groups, or the ion exchanger

is a anion exchange resin based on polystyrene-divinylbenzene.

15. (Currently amended) The mMethod according to claim $\underline{16}$ for the production of 68 Ga-

radiolabelled PET tracers.

16. (Withdrawn) Method according to claim 11 wherein the eluting ⁶⁸Ga³⁺ is in the

picomolar to nanomolar range after the elution, and more preferably in a nanomolar to

micromolar level.

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